Cosmotron

Seismic Configuration Manager 700 (SCM700C)

User Manual

April 2002

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1. INTRODUCTION

1.1. Universal programmable seismic detector, 700-Series

The VVS700 is a fully digital seismic detector using a microprocessor that provides 100% digital signal analysis. Consequently the detector is completely adaptable for all types of applications without compromising detection ability. As the detector is programmed on site, it can be adapted to the environment and eliminate false alarms. With this new technology, the detector can accommodate several different signal analysis programmes in the same hardware where previously only one existed. This makes the 700-Series a fully universal detector suitable for all known applications like safes, vaults, vault doors, ATM's, night safe deposit boxes, weapon stores, etc..

The seismic detector reacts to the characteristic vibration patterns of all breaking-and-entering tools, such as hammers, drills, diamond saws, hydraulic pressure tools and thermal tools, such as welding torch and thermal lance. It can sense vibrations that occur within a 3 to 14 meter radius of where they are mounted, depending on the material and design of the protected object.

1.2. Seismic Configuration Manager 700 (SCM700C)

The Seismic Configuration Manager 700 (SCM700C) is a software program for the programmable seismic detector VVS700. With this program you can adapt the seismic detector to all the different types of objects that you want to protect. You have 100% flexibility with only one detector that you can program to apply to different materials, environments, etc..

The program is easy to install on your laptop. It gives you access to many new features, such as background signal levels, verification of the detector settings, etc., to help avoid false alarms and to achieve the highest performance in signal detection.

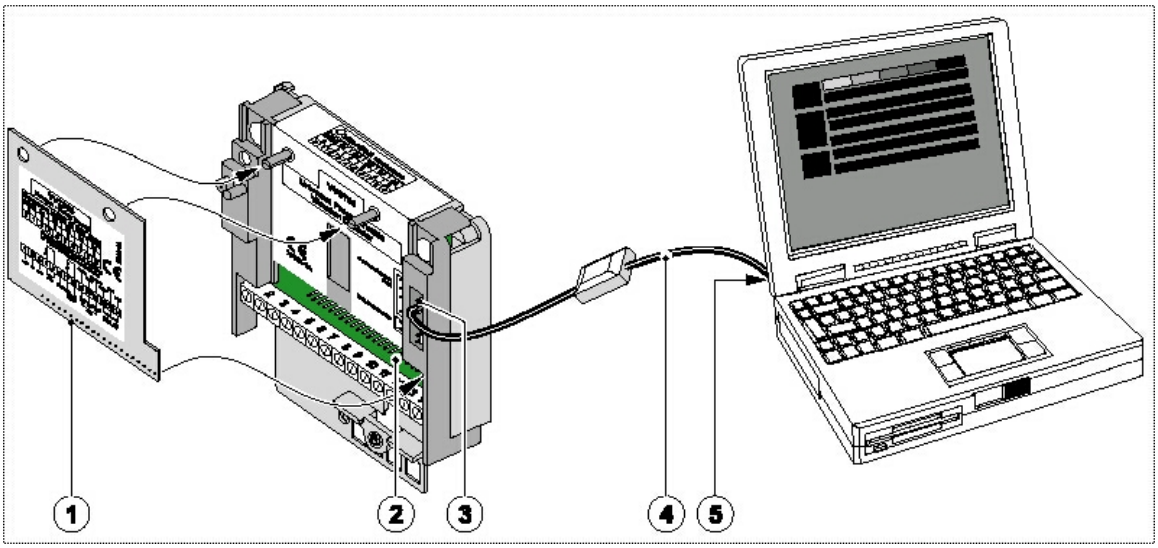
2. GETTING STARTED

2.1. What you will need

As well as the programmable seismic detector and the SCM700C program, you need a configuration cable VVI740 to be able to communicate between the detector and your laptop. A serial communication port, RS232, is required on your laptop. The configuration cable VVI740 is the only tool that the installer needs when configuring the detector.

The programmable seismic detector lets you add customised plug-in boards. The plug-in board connector complies with the IEC standard 839-2. When the detector is installed in an application, there must be a plug-in board connected. The plug–in board determines the functionality at the screw terminals of the detector. For available plug-in boards, contact your distributor. A plug-in board is not required to communicate between the detector and the SCM700C program.

VVS700 = Universal programmable vibration detector
SCM700C = ”Seismic Configuration Manager 700” software
VVK700C = Configuration starters kit. Consists of the configuration cable (VVI740) and the configuration software (SCM700C).
VVI760 = Form A relay board (or VVI770 Form C relay board)



The programmable seismic detector must have a plug-in board (1) connected to the detector. Connect the plug-in board to the detector header (2). Use the configuration cable VVI740 (4) to enable the detector and your computer to communicate. Wire the 5-pole connector on the VVI 740 to the communication port of the detector (3) and the 9-pole connector to the serial port (RS232) of the computer (5).

2.2. Installing the software program

The Seismic Configuration Manager 700 (SCM700C) is supplied on a CD-ROM. The program works on Windows 95, 98, NT and 2000. If you already have a previous version of the SCM700C program installed on your computer, this version must be uninstalled before installing a new version. See Section 2.3.

Place the CD-ROM in the drive and wait at least 10 seconds. The installation program “Setup.exe” runs automatically. Follow the instructions on the screen and enter the information requested. You should now be able to see the SCM700C icon on your desktop. Double-click to run the program. See also the instructions included on the SCM700C CD-ROM.

2.3. Uninstalling a program version

If you already have a previous version of the Seismic Configuration Manager 700 (SCM700C) installed, please uninstall this version before you install an updated program version. Select <Start>, <Settings>, <Control Panel>, <Add/Remove Programs> and remove the old SCM700C version you have.

2.4. The system view

The program is Windows based and you will recognise the layout with pull-down menus in the menu bar and in some boxes. You reach all features and functions through the menu bar at the top. Icons represent special functions, which can be activated by a mouse click. A commando line at the bottom of the screen informs you about required actions and already selected settings.

Available functions are an “Eraser” that will empty/clear the boxes or clear the detection channels.

At the bottom right corner of the program there is a “Return” button that returns you to the previous window or to the pause screen.

3. SETTING UP THE SYSTEM

The first time you use the configuration program SCM700C, set-up the system according to your requirements. The settings will be stored in the program so you only have to do this once. Start the program and select <Setup> in the menu bar. Several options become available that allow you to set-up the software for your needs.

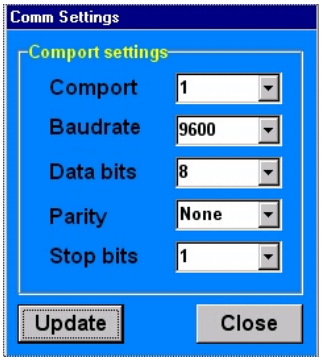
3.1. Language approvals

By default the software starts in English. Under <Setup>, <Languages/Approvals> in the menu bar you will find a list with the following languages available for this program; English, Dutch, German, Swedish, Danish, Italy, Spanish, French and Polish. Select one language that you want the program to use in the future (default setting is English).

If you have any special approval requirements for your market, you can also choose between the following approval standards; NFA2P, VdS, IMQ, ANPI, SBSC, Skafor, CAPP, FG, Techom, SCB and UL/CUL. Selecting an approval will assure that all the selected models are configured with approved characteristics and sensitivity. Please note that some of the settings can be automatically changed to meet the selected approval requirements. Click <Update> after you have made your changes. If no approval standard is required select <None>. The commando line at the bottom of the screen will confirm your selected approval standard.

3.2. Communication/Comport settings

Under <Setup>, <Communication> select the comport setting that is required on your computer. Click <Update> after you have made your changes. Default COM1 is selected. Communication between the detector and the PC requires the following settings:



Comport:	1, 2, 3, or 4 (depending on your computer)
Baud rate:	9600
Data bits:	8
Parity:	None
Stop bits:	1

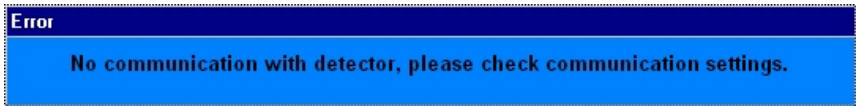
3.3. Communication status

You can always see the communication status between the detector and your laptop at the Communication Status indicator in the bottom right corner on the screen. If you have no communication, check that the configuration cable is properly connected to both detector and laptop and that you have 12 VDC to the detector (screw terminal 1 and 2).

Green light = communication OK

Red light = no or lost communication

When the program is started with no detector connected, there is a communication error message. When the communication is available, this message disappears automatically and the communication status indicator turns green.



The next time communication is lost, there will be a communication error message that will not disappear automatically. This error message needs to be confirmed before the program tries to set-up the communication again. This assures that the operator is aware of the communication lost and knows that the previous tests are invalid.

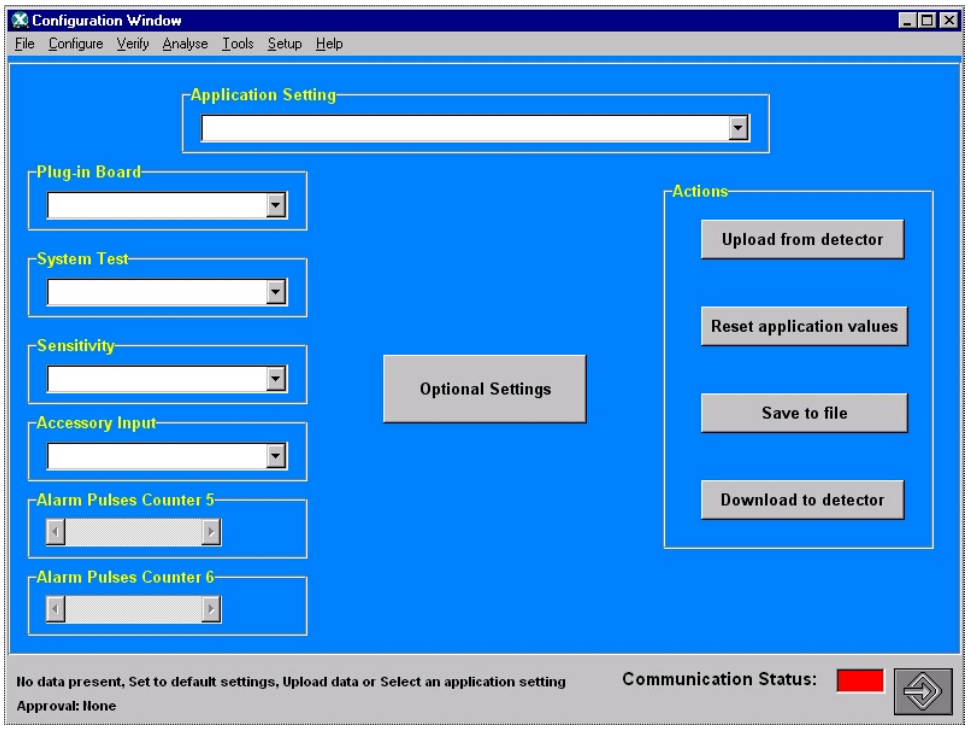
When communication is not achieved, select <Setup>, <Communication> and change the comport setting. Check if the other variables match with the settings mentioned in Section 3.2.

4. CONFIGURING THE DETECTORS

The programmable seismic detector is supplied default programmed. This results in a (configuration) fault signal. Follow the configuration instructions to program the detector for your application.

4.1. Configuration window

To enter the Configuration window, select <Configure> in the menu bar. This window will always be empty when you enter. The commando line in the bottom left corner tells you the status of the displayed window.



There is several ways to continue:

1. Select <Upload from Detector> to read the settings of the detector connected to the PC. All variables will be updated.
2. Select a “Pre-programmed” detector model from the <Application setting> menu box. All variables will show the default model settings.
3. Select <Reset application values>. All variables will show the 700 default settings.

The selected variable can be programmed into the detector by selecting <Download to Detector>. You can save the detector settings under <Save to File>. These settings are stored on the hard disk of the computer.

4.1.1. Basic configuration actions (Five-step configuration)

The following (minimal) steps are required to program a detector:

1. Select <Configure>
2. Select a <Application setting>
3. Select a <Plug in board>
4. Change the sensitivity <Sensitivity>, if necessary.
5. Press <Download to Detector>

The detector is now ready for use.

4.1.2. Application setting

In the <Application setting> box select the detector type that is best suited for your application. All 700 detector types listed have pre-programmed application settings. These settings are approved by the approval agency selected in <Setup>, <Languages/Approvals> (see Section 3.1).

Application Setting
700 Vault and Safe Application
700 Vault and Safe Application
701 (TNO) Vault and Safe Application
702 ATM and Night Deposit Box Applications
703 Light weight Vault and Safe Application
704 Light weight ATM and Night Deposit Box Applications
Custom Special/Customized Applications

700 Vault and Safe Application
Protect any solid structure like vaults, vault doors, safes, weapon cabinets, etc.

701 (TNO) Vault and Safe Application
Protect vaults and safes with increased sensitivity in accordance to the TNO norm.

702 ATM and Night Deposit Box Application
Protect Automatic Teller Machines (ATM’s), night safe deposit boxes and any object that creates vibrations and knockings in normal operation.

703 Lightweight Vault and Safe Application
Protect lightweight safes with adjustable frequency and amplitude scale.

704 Lightweight ATM and Night Deposit Box Application
Protect ATM’s and night safe deposit boxes of lightweight material

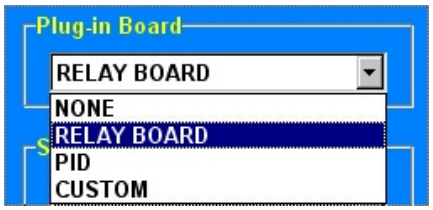
CUSTOM Special/Customised Application
This option give access to Customer Model files (*.cmf). When the operator saves a detector setting (see Section 4.1.11) it is possible to recall (load) this setting with this

option. Select “CUSTOM” and a window appears. This window shows all CMF-files available.

Note: All CMF-files are variant of the approved application settings. Therefore any CMF-file that can be generated by the operator will be an approved application setting.

4.1.3. Plug-in board

Select one of the options in the pull down menu <Plug-in Board> that correspond to the plug-in board being used:



- Relay board

  Form A relay board (VVI760)

  Form C relay board (VVI770)

- PID-Transponder

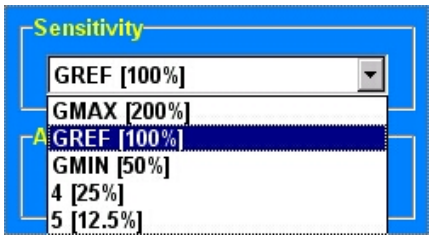
  The plug-in connector applies to the IEC standard 839-2. Any third party transponder can be used. Contact your local distributor for additional information.

- CUSTOM

  For customised hardware solutions, contact local distributor for information.

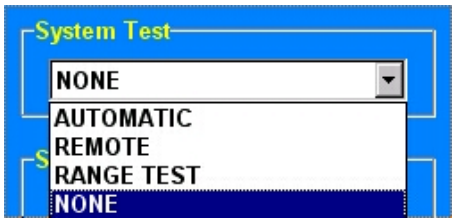
4.1.4. Sensitivity

Set the sensitivity by selecting one of the options in the <Sensitivity> box. There are five incremental steps available of 6 dB each. By looking in the Verify window, you can adapt the detector to the object you want to protect. See Section 5 for further information. The default setting is GREF (100%).



4.1.5. System test

There are three test-modes available in the Configuration window. Select the test mode in the <System Test> box that is best suited for your installation:



- Automatic Test

  The detector performs automatically five self-tests every 24 hours. No external action is necessary. The test interval times are randomly selected by the SCM700C program and downloaded in the detector. This self-test requires a Test Transmitter installed in the detector. The detector drives the test transmitter internally. When vibrations are detected the self-test is successful and no action is taken. If the detector does not sense any vibrations, the fault output is activated. The fault stays activated until the next **successful** test.

- Remote Test

  This self-test requires a Test Transmitter installed in the detector. The test is controlled externally, manually or by the control panel. Refer to the plug-in board manual on how to activate the self-test manually.

  When the self-test is activated, the detector drives the internal test transmitter. When vibrations are detected, the self-test is successful and the alarm output is activated. If the detector does not sense any vibrations, the fault output is activated. The fault stays activated until the next successful test.

- Range Test

  This self-test requires no Test Transmitter. Vibrations are generated with an external Hand Held Tester or the more powerful Range Tester. The test is externally controlled, manually or by the control panel. Refer to the plug-in board manual how to activate the self-test manually.

  When the self-test is activated, the detector waits until a vibration is detected. When vibrations are detected the self-test is successfully and the alarm output is activated. If the detector does not sense any vibrations no action is taken. The alarm signal will reset after “alarm latch time” is expired (see Section 4.2.1).

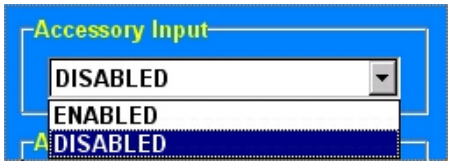
  Application area:

  This test is normally used to simultaneously test more than one detector in an installation. For example, an object is protected with four detectors. All detectors are configured with “Range test”. The control panel activates the test mode (parallel line for all detectors) and activates the Range Tester. After a pre-determined time all detectors should detect the vibrations and report it to the panel by activating the alarm output.

4.1.6. Accessory input

The programmable seismic detector has an auxiliary input (screw terminal 3). This input acts like an external tamper switch. When this input is enabled, an alarm signal will be activated. This input can be used to connect one of the accessories available for the 700-series.

If you want to install the detector together with either a Day/Night Plate or a Keyhole Protection Kit, you must select <Enabled> in the <Accessory Input> box (default setting is "Disabled").



4.1.7. Alarm Pulses Counter 5

The application settings 700 and 703 have a pulse counter channel feature. Select the number of actual pulses that you want the detector to detect before it triggers an alarm. You can choose between 2-25 pulses. Default setting is five pulses. This detector box cannot be changed when other detector types are selected.

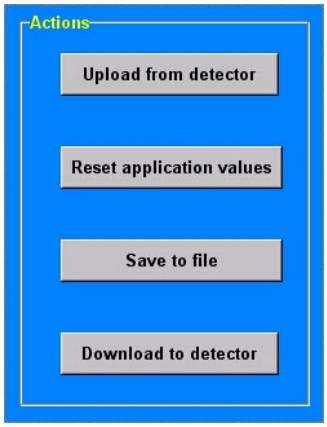
4.1.8. Alarm Pulses Counter 6

The application setting 701 has a special pulse counter channel feature, which is in accordance with the TNO norm. Select the number of actual pulses that you want the detector to detect before it triggers an alarm. You can choose between 2-25 pulses. Default setting is five pulses. This detector box cannot be changed when other detector types are selected.

4.1.9. Upload from detector

Each time the operator enters the Configuration window, all boxes are empty. To receive the actual settings of the attached detector, press <Upload from detector>. The SCM700C program loads the settings of the detector and immediately updates all boxes.

After an upload, the command line (left bottom corner of the screen) will mention “Detector readings”. Consequently you can easily see the current settings on each detector.



4.1.10. Reset application values

If you click the box <Reset application values> the program automatically chooses a specific setting. This default setting is there to help Technical Support and to give you and the Help Desk the same starting point. The default setting is that of the 700 application setting.

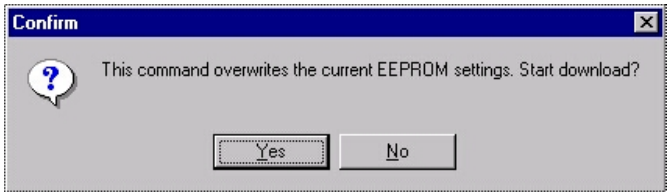
4.1.11. Save to file

The operator can save a particular setting. If there are several detectors, which have specific settings that differ from the default application settings, these settings can be programmed and then saved on the hard disk of the PC. These files are called “Customer model files” and will have the extension *.CMF. To save the settings on a disk, select <Save to file>. Enter a filename and select <Save>. This file can be loaded with the option <CUSTOM> in the <Application setting> box (see Section 4.1.1).

4.1.12. Downloading to the detector

When all the settings for your installation are selected, click the <Download to detector> box to save the settings into the detector. The program notifies you that the settings of the connected detector will be lost and replaced with the settings that are currently selected in the SCM700 program. The following message appears: “This command overwrites the current EEPROM settings, start download?” select <Yes>. When this message is acknowledged, a “Download progress bar” appears, which shows the progress of the downloading.

All changes made to the settings in both Configuration window and under <Optional settings> are downloaded to the detector by clicking the box <Download to detector>.



4.2. Optional settings

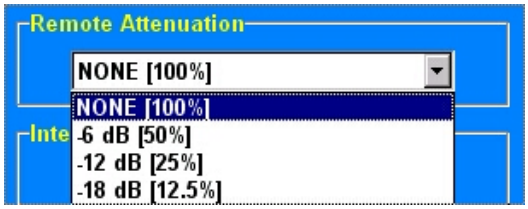
Select <Optional settings> in the Configuration window and you can change even more settings to further adapt the detector to your specific installation. These settings are optional. If you choose not to do any changes in this window, the program automatically selects the default settings shown in the adjacent window. All setting changes made under <Optional settings> downloaded to the detector by clicking the box <Download to detector> in the Configuration window.

4.2.1. Alarm latch time

The alarm latch time is the time that the alarm output is activated after an alarm condition. When the time has expired, the alarm output returns to a “NON-alarm” state. The communication panel of the security system will latch the alarm signals until action has been taken. In the <Alarm Latch Time> box, you can change the alarm latch time from 0 to 120 seconds. Default setting is 3 seconds.

4.2.2. Remote attenuation

The Remote Attenuation function prevents false alarms when you want to protect objects that generate internal vibrations during normal operation, for example, an Automatic Teller Machine (ATM). By selecting one of the options in the <Remote attenuation> box, you temporally reduce the sensitivity. Each step lowers the sensitivity by 6dB. Default setting is <NONE (100%)>, which means there is no reduced sensitivity. The moment and time period of the sensitivity reduction is externally controlled. The protected installation / machine should be able to activate the remote sensitivity input. Please refer to the plug-in board manual on how to operate the sensitivity input (screw no 14).



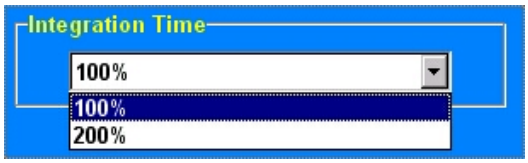
Note: Application settings 702 / 704 have specially designed integrator channels for ATM applications which take into account the characteristic signals produced by this type of equipment. Only use the remote attenuation feature when default application settings are not applicable.

4.2.3. Integrator Warning Level

In the <Integrator Warning Level> box you can select when the detector should give a pre-alarm. You can select between 0-100 %. Default setting is 75%, which means that when the activated integration channels have reached 75% of their threshold the detector will give a pre-alarm as a warning. Please refer to the plug-in board manual to see if it supports warning signals.

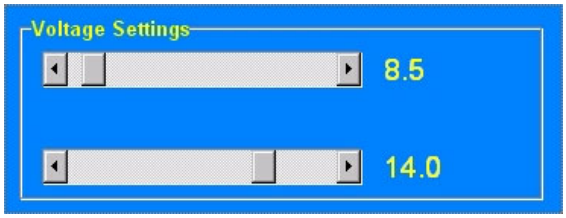
4.2.4. Integration time

If you want to change the integration time (time to alarm), select <200%> in the <Integration time> box. It will now take approximately twice as long before the detector reaches the alarm threshold. Default setting is <100%>.



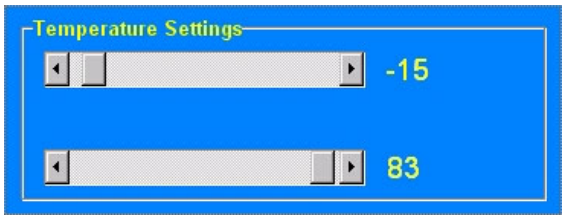
4.2.5. Voltage settings

The detector triggers a sabotage alarm if the voltage goes below or over the selected voltage settings. You can set the voltage between 8.0 V to 16.0 V. Default setting is 8.5 V – 14.0 V.



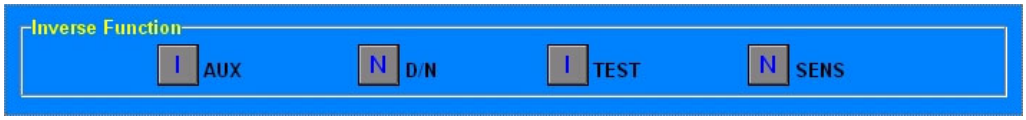
4.2.6. Temperature settings

The detector triggers a sabotage alarm if the temperature goes below or over the selected temperature settings. You can set the temperature between -20ºC and +85ºC. Default setting is -15ºC to +83ºC.



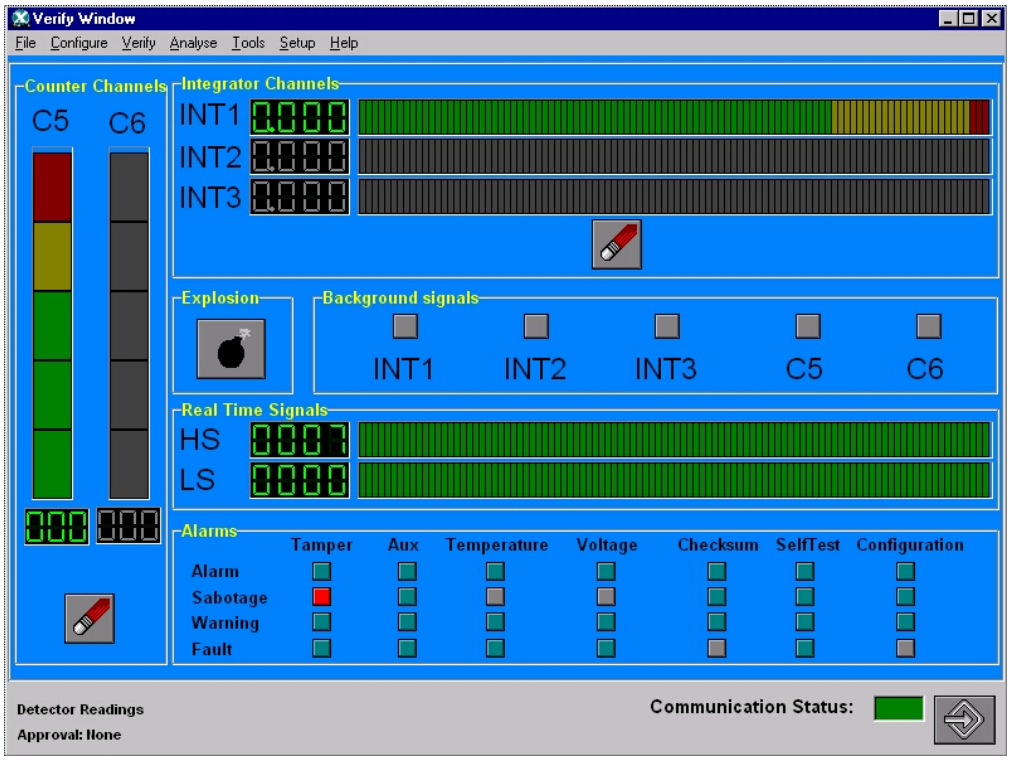
4.2.7. Inverse function

The inverse function makes four inputs/outputs polarity changeable on the detector; accessory input (screw 3), Day /night mode (screw 12), test transmitter input (screw 13) and remote attenuation (screw 14). To change the polarity just click the <N> (Normal) or <I> (Inverse) box. This option is only available when the relay board is selected as a plug-in board, see section 4.1.3.



5. VERIFING THE DETECTOR SETTINGS

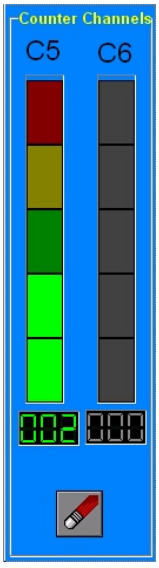
This window verifies the application settings downloaded to the detector in the Configuration window. You can adapt the detector to the object you want to protect by using this feature. If you test the detector installation by using a Hand Tester, you can see how the detector is reacting in real-time on manually applied vibrations. If the detector is too sensitive, return to the Configuration window and reduce the sensitivity to avoid false alarms.



Note: Do not forget to first download your changes in the Configuration window to the detector, as otherwise you will not see any changes in the detector's performance.

5.1. Counter Channels

The Counter Channel only shows the activated channel depending on which application setting you have selected in the Configuration window. Counter channel 5 is activated when the application settings 700 and 703 are selected. Counter channel 6 is activated when application setting 701 is selected. When the detector detects a pulse, it starts to count (the blocks light up) until the detector has reached the alarm level. The counter channel that is not activated is grey scaled. The counter channel also looks different depending on the number of pulses selected. The yellow blocks show the warning area and the red block shows the alarm.



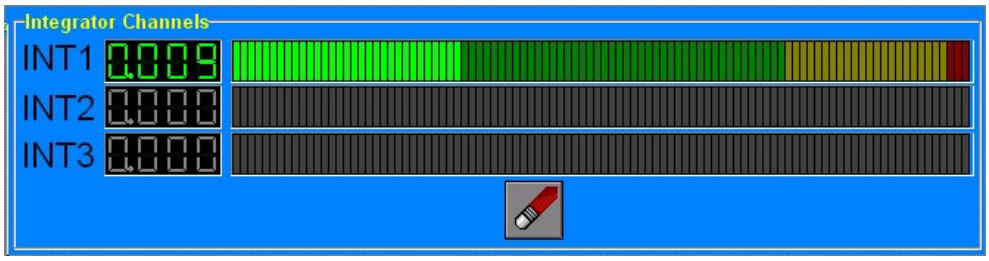
The picture shows the default setting for the detector type 700 with five pulses. Two pulses have been detected.

5.2. Explosion Channel

The Explosion block will turn red when the detector is detecting an explosion.

5.3. Integrator Channels

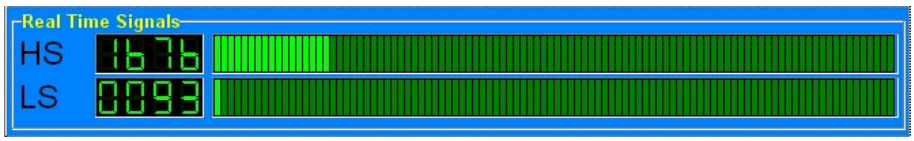
The Integrator Channels only shows the activated channel depending on which application setting you have selected in the Configuration window. Integration channel 1 is activated when application settings 700, 701 and 703 are selected. Integrator channels 2 and 3 are activated when application settings 702 and 704 are selected. When the detector detects a vibration, it starts to integrate (the area lights up) until the detector has reached the alarm level. The integrator channel that is not activated is grey scaled. The integrator channel also reacts differently depending on which sensitivity settings and detection time selected in the Configuration window. The yellow blocks shows the warning area and the red block shows the alarm.



The picture shows the default setting for the application setting 700 with 75% warning level.

5.4. Real Time Signals

The Real Time Signals bars show the strength of the vibrations detected. When these signals become too strong, there is a risk of the detector starting to integrate and eventually triggering an alarm. The window shows two different detection signals. One signal applies to the high sensitivity (HS) channels, the other to the low sensitivity (LS) channels. The HS is used for the integrators and the pulse counter 6 and the LS is used for the pulse counter 5 and the explosion channel. Both channels are analysed and can trigger an alarm.

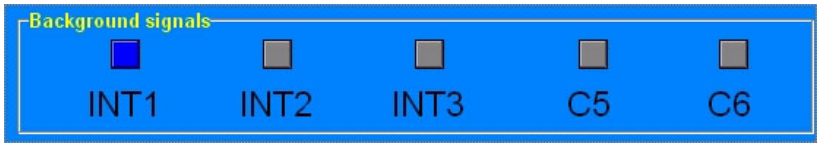


It is recommended that you try to remove the source of ambient noise instead of reducing the sensitivity

5.5. Background Signals

The VVS700 detector is designed to detect very weak signals (thermal lance attacks). If the detector is too sensitive, the detector may start to integrate due to background vibrations. External machinery, traffic, etc. can cause background vibrations.

If the background signals are too strong, the detector starts to integrate or count pulses. When the background signal indicators turn blue, the corresponding integrators and/or counters are activated and eventually will cause false alarms.



This means you must remove the source of ambient noise or adjust the sensitivity so that when it is in a quiet state (no external vibrations applied only “environmental” vibrations), the background signal indicators do not turn blue.

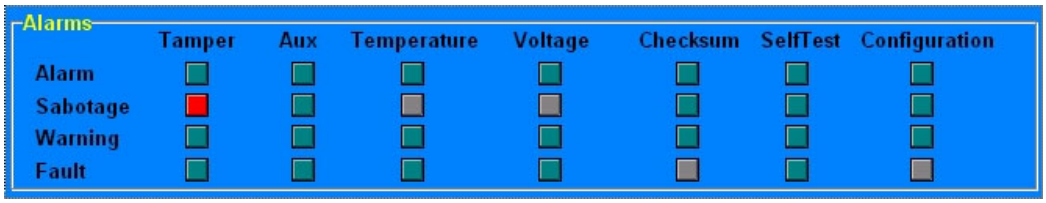
5.6. Alarms

The selection of events that can be detected by the detector is listed horizontally. A signal is generated when:

Tamper:	Combined tamper and pry-off
Aux:	An event is detected on the auxiliary input (see Section 4.1.6)
Temperature:	Maximum and minimum temperature limits exceeded (see Section 4.2.6)
Voltage:	Maximum and minimum voltage limits exceeded (see section 4.2.5)
Checksum:	The settings of the detector are corrupted. The settings programmed in the detector are verified every 24 hours.
Self-test:	The self-test has failed.
Configuration:	When the programmable seismic detector leaves the factory it is default programmed. If the operator has not programmed the detector, a configuration error signal is generated.

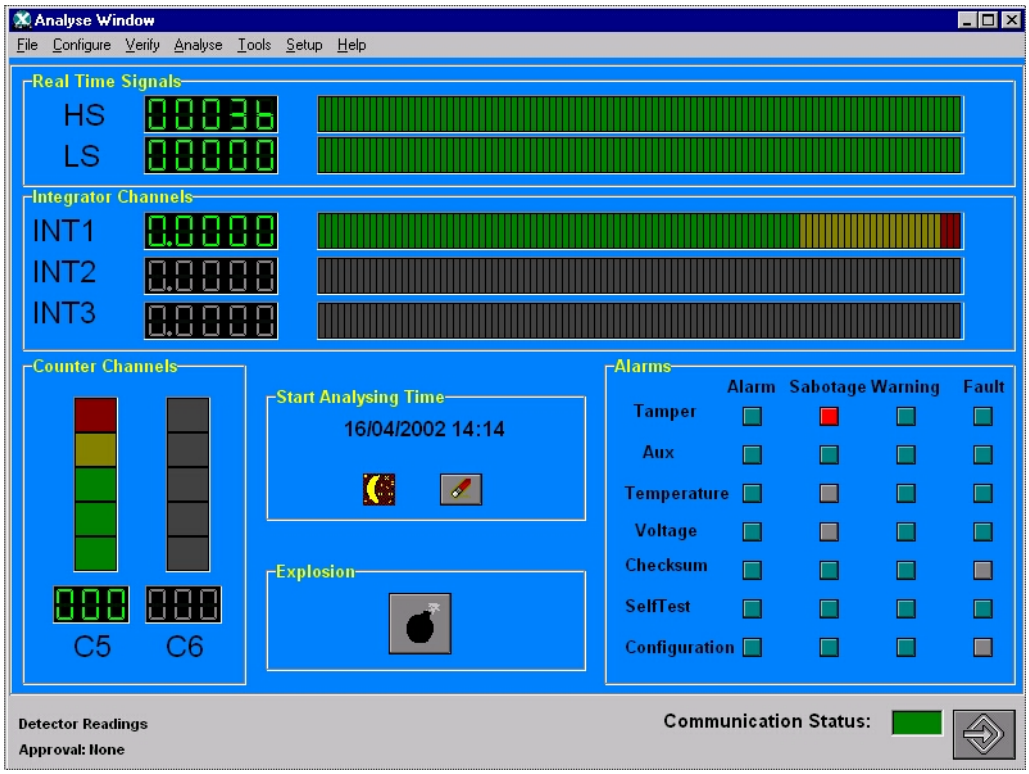
The selection of output signals is listed. The events can be directed to one of the four outputs: Alarm, Sabotage, Warning and Fault.

A grey indicator indicates that the event is selected. When the indicator turns red, the event is detected and signalled on the selected output. In the picture below Tamper is signalled on the sabotage output.



6. ANALYSING THE DETECTOR SETTINGS

The Analyse window memorises all peak signal values of the detector from the time of activation. Select <Analyse> in the menu bar to reach it. You can always access the Analyse Window and reset the peak values.

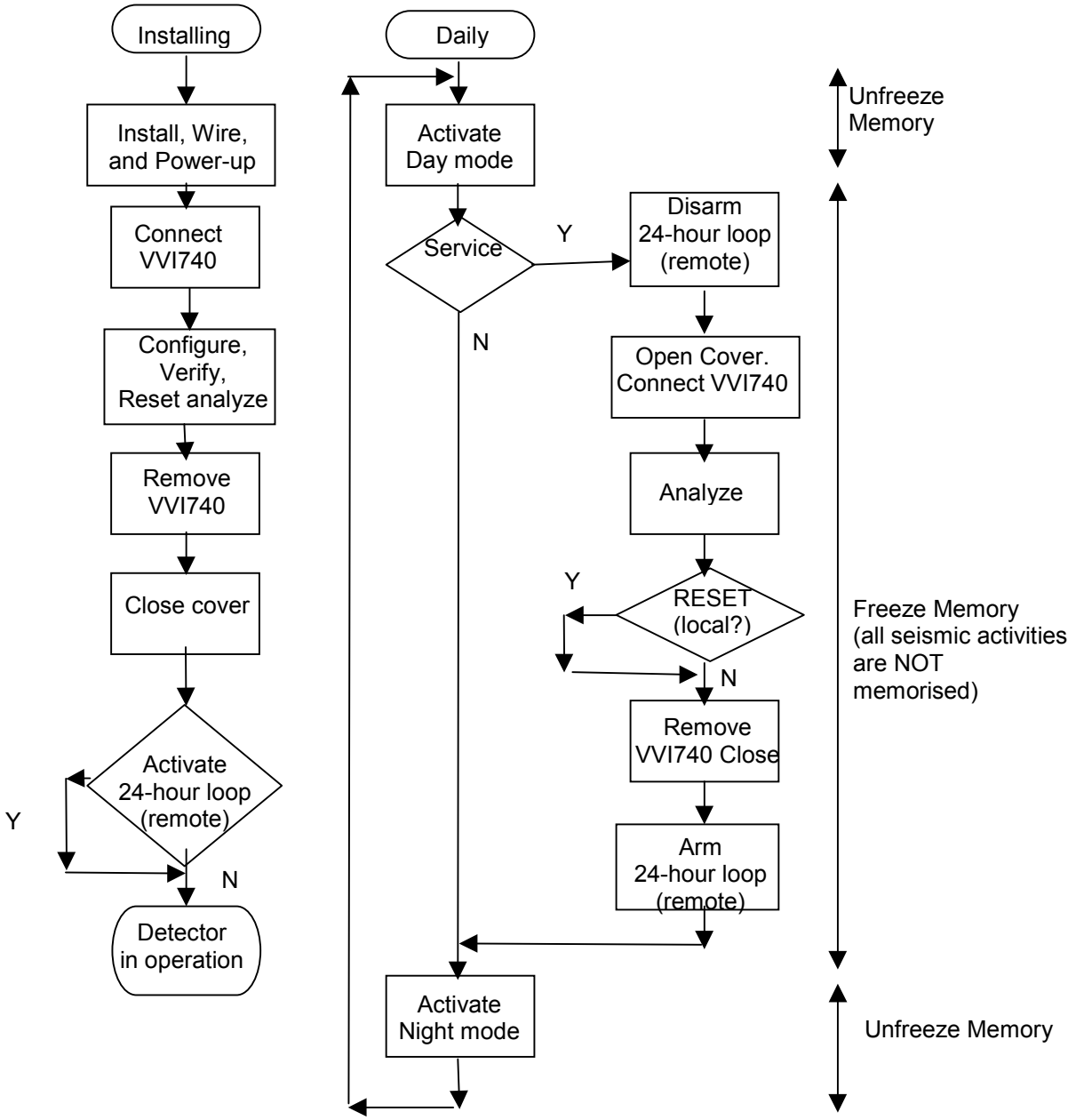


The Day / Night mode is linked to the Arm / Disarm function of the control panel. When the Night mode (armed) is activated, there will be a “moon” in the “Start Analysing Time” box. When the Day mode (disarmed) is activated, it will be a “sun”. To reset the time/date stamp, click the erasure button. The date/time stamp is stored in the detector’s memory. This “local” resetting of the Analyse Window functions is independent of the Day / Night mode.

If the detector switches from Night mode to Day mode, the values/events are frozen (not reset). Events that occur when the detector is in Day mode are NOT memorised. This allows the installer to open the detector and read the memory content without changing the peak values.

> **Note:** The 24-hour alarm loop need to be disabled when the installer open the detector in order to prevent a sabotage alarm generated by the tamper switch when the cover is removed from the detector.

These (peak) signals are stored in the detector. The PC and the SCM700C software do not have to be connected to the detector in order to use this function. When the detector is powered down, the analysed information is lost.


Installing
Install, Wire, and Power-up
Connect VVI740
Configure, Verify, Reset analyze
Remove VVI740
Close cover
Activate 24-hour loop (remote)
Y
N
Detector in operation
Daily
Activate Day mode
Service
Y
N
Disarm 24-hour loop (remote)
Open Cover. Connect VVI740
Analyze
RESET (local?)
Y
N
Remove VVI740 Close
Arm 24-hour loop (remote)
Activate Night mode
Unfreeze Memory
Freeze Memory (all seismic activities are NOT memorised)
Unfreeze Memory

7. ADVANCED FEATURES

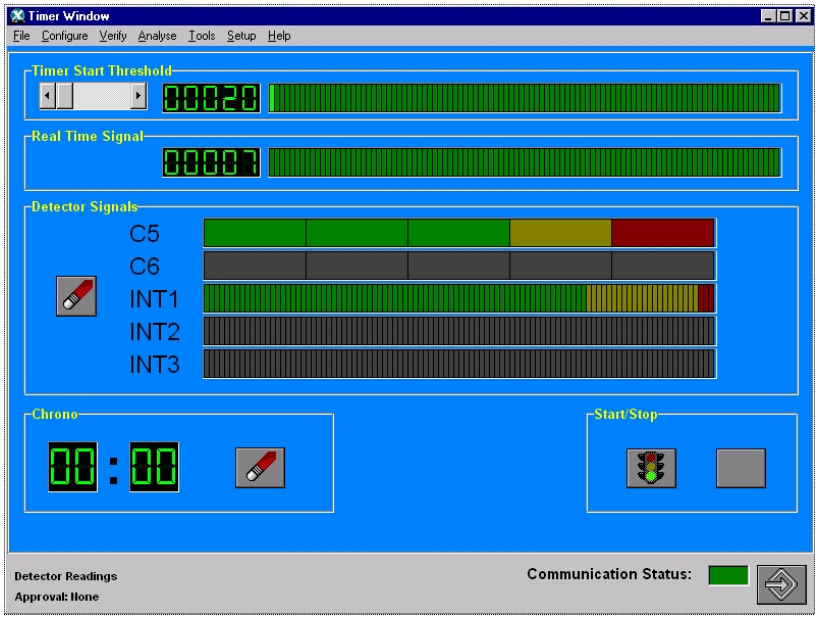
There are several advanced features under <Tools> in the menu bar that will help you optimise the installation and performance of the detector. There are also tools available for more detailed on-site performance measurements.

7.1. Timer

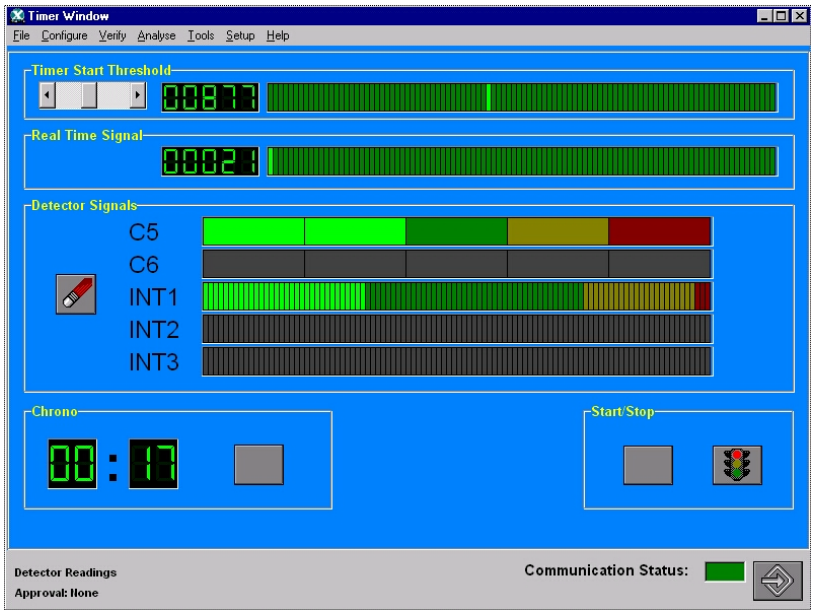
Select <Tools>, <Timer> in the menu bar. In the Timer window you can test the detector with a stopwatch.

The “Real Time Signal” bar shows the vibration strength as measured by the detector. This is the same signal as shown in the Verify window. With the “Timer start threshold” the operator can select a signal strength that corresponds to the real time signal strength shown in the “Real Time Signal” window. When the measured signal strength exceeds the threshold level (for example, caused by a Hand Held Tester), the "Timer" function is activated.

All available integrators / counters can be watched during the test. Only activated signals are displayed (this depends on the “Application setting” selected in the Configuration window).



Start the test by clicking the green light in the <Start/Stop> box. The test is activated but the timer only starts when the “Real Time Signal” strength indicator exceeds the threshold level. Apply vibrations manually with a Hand Tester. The results of the applied vibrations are shown in the <Detector Signals> box. When the detector goes into alarm, the stopwatch automatically stops and you can easily see the “Time to Alarm”. If you are unhappy with the result, return to the Configuration window by selecting <Configure> in the menu bar and adjusting the settings. Do not forget to download the changes by clicking the >Download to Detector> box.

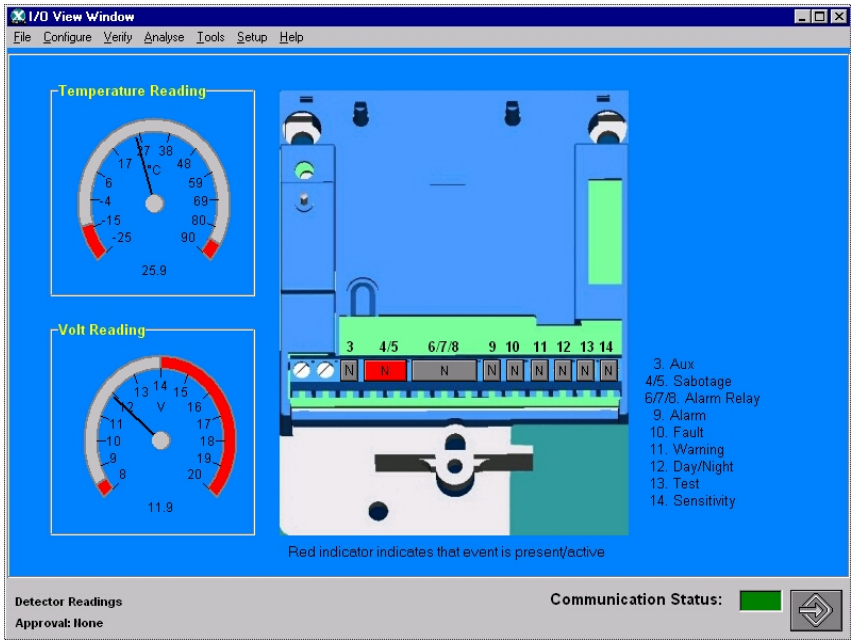


To stop the test before the detector triggers an alarm, click the red light in the <Start/Stop> box. If you want to clear all the boxes after the test, click the “Eraser” box.

7.2. Viewing I/O (Inputs/Outputs)

Select <Tools>, <View I/O> in the menu bar. The <I/O View Window> shows the actual status of the input and output signals in real-time. The simulation of these input / output signals depends on the selected plug-in board. The picture shows the simulation of the input and output signals when a relay board is selected as plug-in option. A red indicator indicates that an event is present/active.

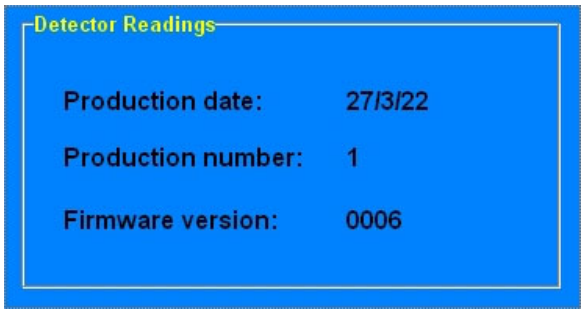
In the <Temperature Reading> box you can see the actual temperature of the detector and the temperature settings. If you want to change the temperature settings, see Section 4.2.6. In the <Volt Reading> box you can see the actual voltage and the voltage settings. If you want to change the voltage settings, see Section 4.2.5.



Note: Temperature and voltage readings are approximately correct within a slight tolerance.

7.3. Detector info

Select <Tools>, <Detector Info> in the menu bar. The <Detector Readings> box provides information on the detector, such as production date, production number and the firmware version in the detector. This is the unique serial number for the detector.



7.4. Event logging

Event logging is a feature that logs all detector events in a log file. The PC and the SCM700C software need to be connected to the detector during the evaluation period. Events are defined as:

- Increase / decrease of pulse counters
- Increase / decrease of integrators with a “delta” of 10%
- The transition of integrators into warning area
- Alarm of integrators / counters
- Activation of output signals like:

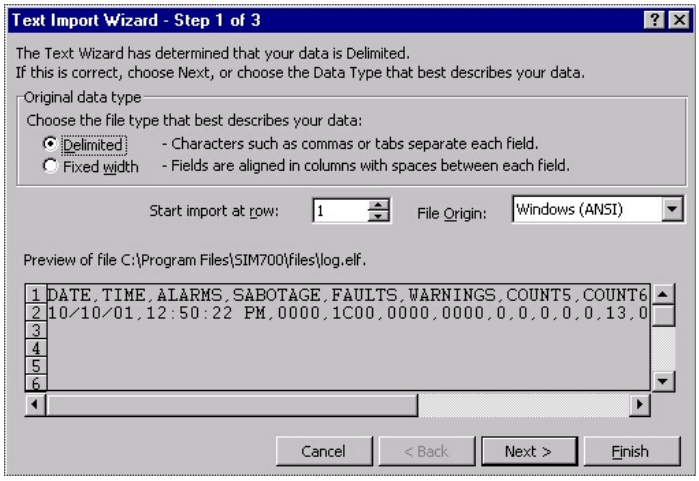
  1. Alarm
  2. Sabotage
  3. Warning
  4. Fault

This log-file (*.ELF) can be imported into EXCEL. To activate the event logging, select <Tools>, <Event logging> in the menu bar. A mark in front of the <Event Logging> appears when it is activated. In the command line, the text “ Event logging” alerts the operator that the event logging is activated. The program now automatically stores all activities from the activated channels in a log file. To stop the event logging, select <Tools>, <Event logging> again in the menu bar and the mark will disappear.

To open this log file, go to Excel. Select <File>, <Open> (the log files are located in the “Files” folder of the SCM700C software). This folder is located in the directory C:\program files\SCM700C\files. The log file is stored in *.elf format and you must select <All files (*.*)> in the <Files of Type> box to see it. Double click the <log.elf> file and a message box called “Text import Wizard” appears. To convert the log file into Excel format:

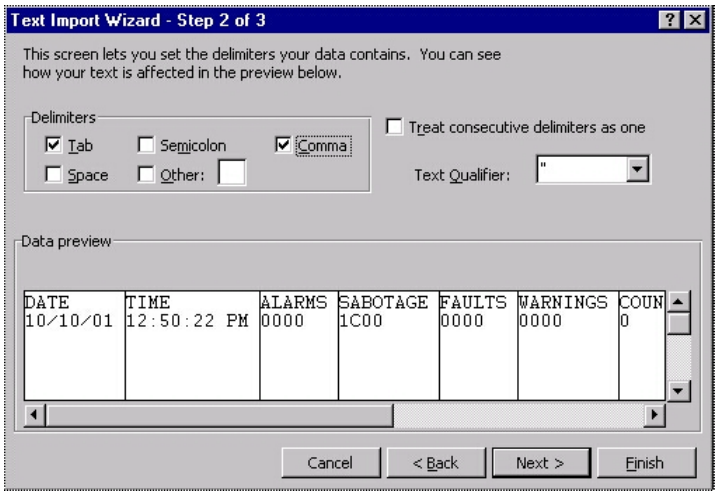
Step 1:

- Select <Delimited>
- Click <Next>


Text Import Wizard - Step 1 of 3
The Text Wizard has determined that your data is Delimited.
If this is correct, choose Next, or choose the Data Type that best describes your data.
Original data type
Choose the file type that best describes your data:
Delimited - Characters such as commas or tabs separate each field.
Fixed width - Fields are aligned in columns with spaces between each field.
Start import at row: 1
File Origin: Windows (ANSI)
Preview of file C:\Program Files\SIM700\files\log.elf.
1 DATE,TIME,ALARMS,SABOTAGE,FAULTS,WARNINGS,COUNT5,COUNT6
2 10/10/01,12:50:22 PM,0000,1C00,0000,0000,0,0,0,0,13,0
Cancel
< Back
Next >
Finish

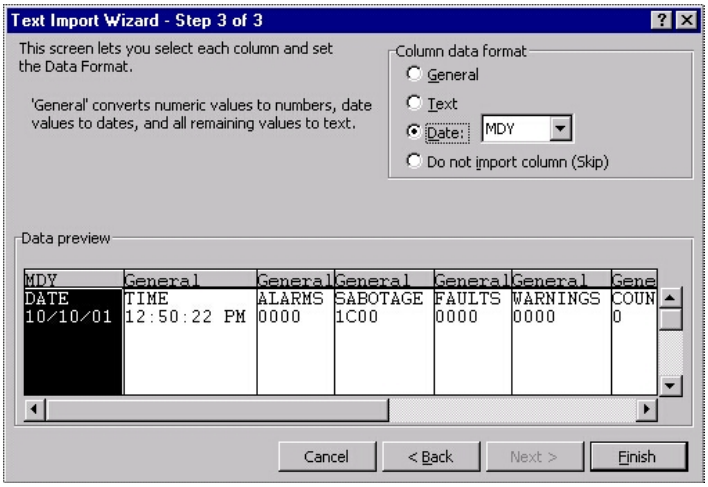
Step 2:

- Select <Tab> and <Comma>
- Click <Next>


Text Import Wizard - Step 2 of 3
This screen lets you set the delimiters your data contains. You can see how your text is affected in the preview below.
Delimiters
Tab
Semicolon
Comma
Space
Other:
Treat consecutive delimiters as one
Text Qualifier: "
Data preview
DATE TIME ALARMS SABOTAGE FAULTS WARNINGS COUN
10/10/01 12:50:22 PM 0000 1C00 0000 0000 0
Cancel
< Back
Next >
Finish

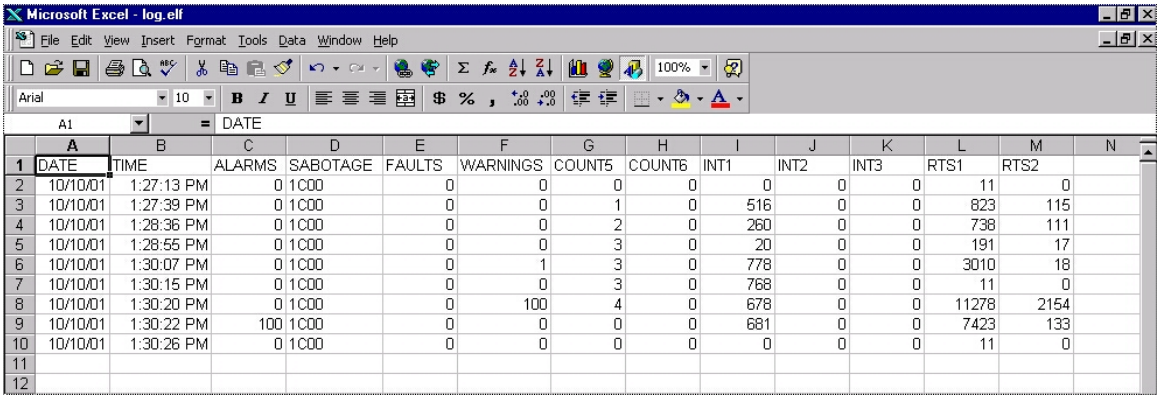
Step 3:

- Select <Date>. The pull down menu shows <MDY>
- Click <Finish> to convert the file to Excel format


Text Import Wizard - Step 3 of 3
This screen lets you select each column and set the Data Format.
'General' converts numeric values to numbers, date values to dates, and all remaining values to text.
Column data format
General
Text
Date: MDY
Do not import column (Skip)
Data preview
MDY General General General General General Gene
DATE TIME ALARMS SABOTAGE FAULTS WARNINGS COUN
10/10/01 12:50:22 PM 0000 1C00 0000 0000 0
Cancel
< Back
Next >
Finish

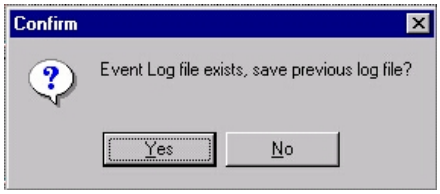
The columns show: Date, Time, Alarm output, Sabotage output, Fault output, Warning output, Pulse counter 5, Pulse counter 6, Integrator 1, Integrator 2, Integrator 3, and both High and Low Real Time Signal strength.

The values shown in the columns C to F are event codes. For example, line 8 shows that the warning output is activated. Code 100 means that this is caused by pulse counter 5 that exceeded the warning threshold (default at 4 counts). In line 9 the alarm output is activated. Again pulse counter 5 caused this event (code 100).



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	DATE	TIME	ALARMS	SABOTAGE	FAULTS	WARNINGS	COUNT5	COUNT6	INT1	INT2	INT3	RTS1	RTS2	
2	10/10/01	1:27:13 PM	0	1C00	0	0	0	0	0	0	0	11	0	
3	10/10/01	1:27:39 PM	0	1C00	0	0	1	0	516	0	0	823	115	
4	10/10/01	1:28:36 PM	0	1C00	0	0	2	0	260	0	0	738	111	
5	10/10/01	1:28:55 PM	0	1C00	0	0	3	0	20	0	0	191	17	
6	10/10/01	1:30:07 PM	0	1C00	0	1	3	0	778	0	0	3010	18	
7	10/10/01	1:30:15 PM	0	1C00	0	0	3	0	768	0	0	11	0	
8	10/10/01	1:30:20 PM	0	1C00	0	100	4	0	678	0	0	11278	2154	
9	10/10/01	1:30:22 PM	100	1C00	0	0	0	0	681	0	0	7423	133	
10	10/10/01	1:30:26 PM	0	1C00	0	0	0	0	0	0	0	11	0	
11														
12														

The next time you make an event logging, the program will overwrite the old log file with the new file if you do not choose to save the old file under a new name. The log data will always be saved in the file log.elf. This file is located by default in the folder: C:\program files\SCM700C\files.



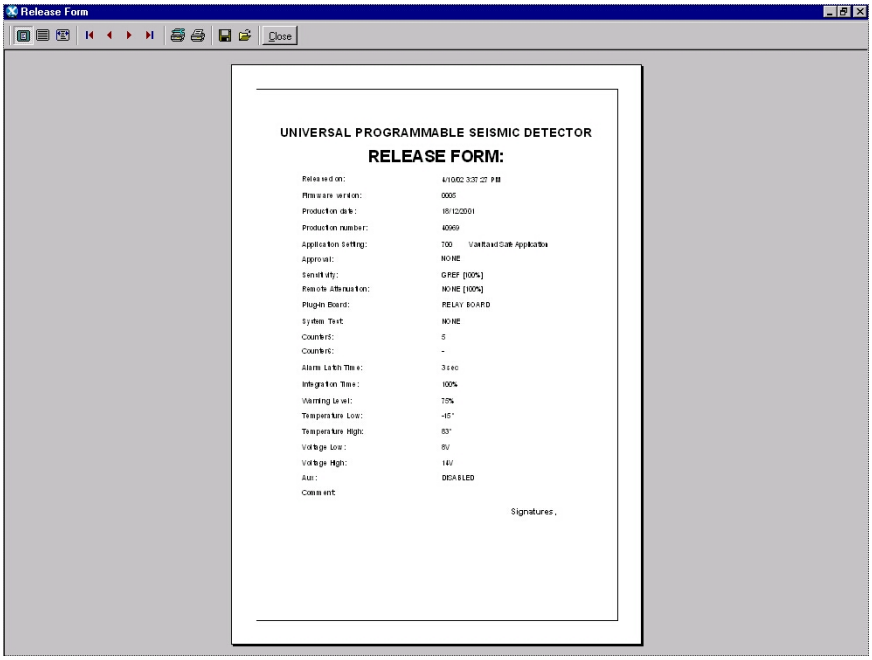
8. PRINTING THE RELEASE FORM

The Release Form is a document that shows all the settings of the detector when the programming is completed. It can be printed direct or saved to a file and should be signed by the installer. This document confirms the installation and the detector settings for the customer.

8.1. Print Release Form

Select <File>, <Print Release Form> in the menu bar. The document shows the following settings that you have programmed into the detector and detector information:

- Released On
- Firmware Version
- Production Date
- Production Number
- Application setting
- Approval
- Sensitivity
- Remote Attenuation
- Plug-in Board
- System Test
- Counter 5
- Counter 6
- Alarm Latch Time
- Integration Time
- Warning Level
- Temperature Low
- Temperature High
- Voltage Low
- Voltage High
- Aux
- Comment



You can both print or save the document on your laptop or on diskette. To return to the Configuration programme, select <Close> in the menu bar.

You can personalise the Release Form by including a name identification or a company logo. Follow the instructions in Sections 8.2 and 8.3.

8.2. Identification

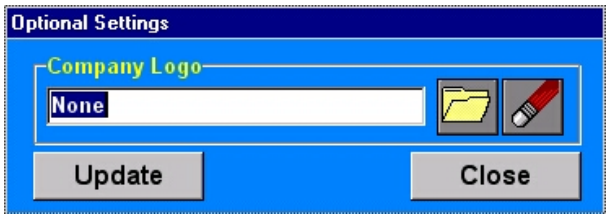
To personalise the Release Form with your name and company address, select <Setup>, <Identification> in the menu bar. Fill in the information you want to be added to the Release Form and click<Update>.

8.3. Company logo

To print the company logo on the Release Form, select <Setup>, <Options> in the menu bar. Select the “Open file” icon to enter your Windows Explorer and select the logo file you wants to use by clicking <Open>. The file name appears in the Logo window. Update the Release Form with this information by clicking <Update> in this box. To remove a logo file, click the “eraser” icon.

Note: The logo should comply with the following standards:

- JPG format
- (The picture will scale automatically)



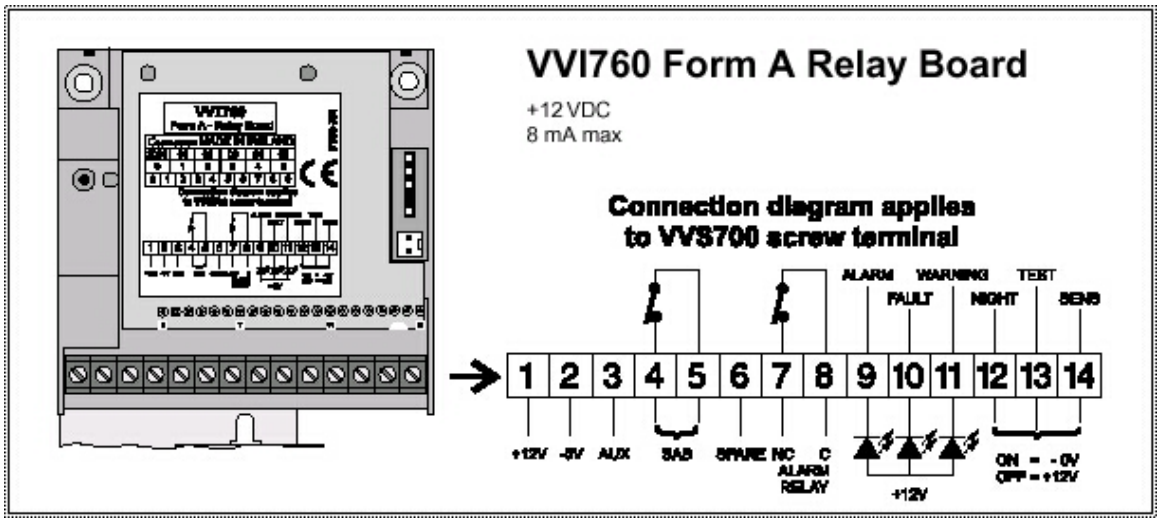
9. CONFIGURATION ACCESSORIES

9.1. Configuration starters kit, VVK700

The configuration cable VVI740 enables the detector and the computer to communicate. A serial communication port, RS232, is required on your laptop. The cable is the only installation tool that the installer needs when configuring the detector. Supplied with the cable is the Seismic Configuration Manager 700 (SCM700C), the software program.

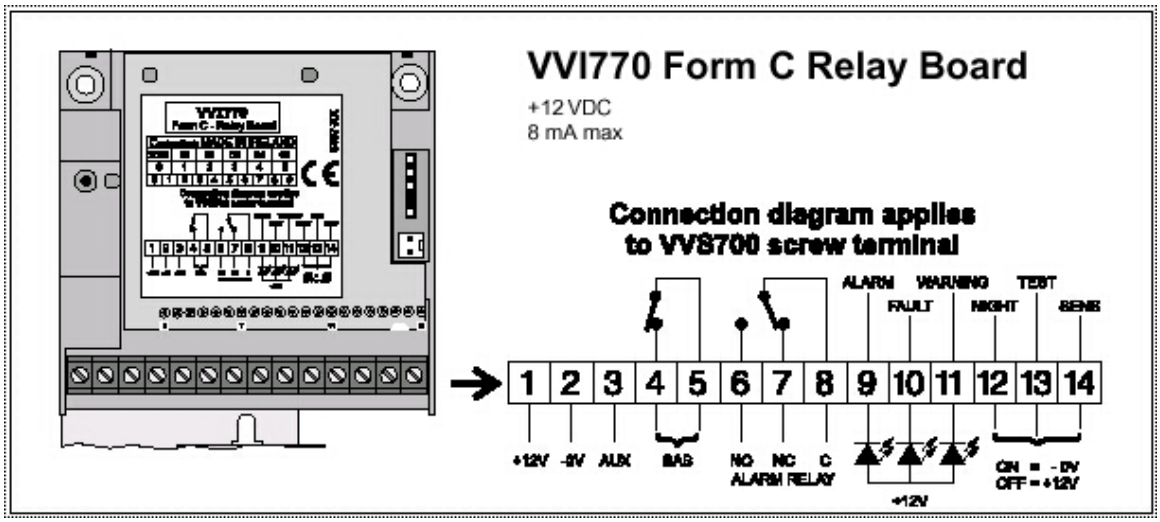
9.2. Form A relay board

The VVI760 is a Form A relay board with a plug-in connector to connect the relay board to the detector header. The connection diagram applies to VVS700 screw terminal



9.3. Form C relay board

The VVI770 is a Form C relay board with a plug-in connector to connect the relay board to the detector header. The connection diagram applies to VVS700 screw terminal.



10. ENGINEERING

This section is not available to the installer / customer.

A password is required to enter this section. Passwords can be requested but will only be granted to Interlogix employees who have attended the “Advanced SCM700C applications” course.

Access will be registered by name with a personal password.

11. SPECIAL APPLICATIONS

The 700 Series allows the hardware to be adapted to almost any application. There are five default application settings. These settings are tested and approved by various approval agencies. These default detector types are optimised for vault, vault doors, safes, ATM’s, Night Safe Deposit Boxes, Weapon Stores, Filing Cabinets, etc.. However, these detector types could also be useful for other applications.

If there is an application area where the default detector types are NOT sufficient, contact your local distributor. They can arrange a meeting with a specialised seismic engineer to discuss the possibilities. The 700 Series can also be reprogrammed in the most cases for your special needs.

Special requests can range from sensitivity changes, input / output signal configurations, signal polarity changes, etc. These requests will be tested and a special Customer Model File will be generated for your application. These customised detector settings can then be loaded as described in Section 4.1.11.